# § 463.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the applica-tion of the best available technology economically achievable.

- The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.
- (b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate, there are no toxic pollutants in treatable concentrations in finishing waters. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to BPT effluent limitations guidelines.

#### § 463.34 New performance source standards.

- NSPS bis(2-ethylhexyl) for phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.
- (b) Any new source subject to this subpart must achieve performance standards (i.e., mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the finishing water processes at a new source times the following pollutant concentrations:

# SUBPART C [Finishing water]

Concentration used to	calculate NSP	S
Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Maximum for monthly average (mg/l)
TSSpH	130 (¹)	37 (¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source finishing water processes from the permittee.

#### §463.35 Pretreatment standards for existing sources.

- PSES for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.
- (b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403-General Pretreatment Regulations.

#### §463.36 Pretreatment standards for new sources.

- PSNS for bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and dimethyl phthalate are reserved.
- (b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403-General Pretreatment Regulations.
- § 463.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

# PART 464—METAL MOLDING AND CASTING POINT SOURCE CAT-**EGORY**

GENERAL PROVISIONS

464.01 Applicability.

464.02 General definitions.

464.03 Monitoring and reporting requirements.

464.04 Compliance date for PSES.

#### Subpart A—Aluminum Casting Subcateaory

- 464.10 Applicability; description of the aluminum casting subcategory. 464.11 Specialized definitions.
- 464.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 464.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best technology available economically achievable.
- 464.14 New source performance standards.
- 464.15 Pretreatment standards for existing sources.
- 464.16 Pretreatment standards for new sources.
- 464.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

#### Subpart B—Copper Casting Subcategory

- 464.20 Applicability; description of the copper casting subcategory.
- 464.21 Specialized definitions.
- 464.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best

- practicable control technology currently available.
- 464.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 464.24 New source performance standards.
- 464.25 Pretreatment standards for existing sources.
- 464.26 Pretreatment standards for new sources.
- 464.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

#### Subpart C—Ferrous Casting Subcategory

- 464.30 Applicability; description of the ferrous casting subcategory.
- 464.31 Specialized definitions.
- 464.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 464.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 464.34 New source performance standards.
- 464.35 Pretreatment standards for existing sources.
- 464.36 Pretreatment standards for new sources.
- 464.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

#### Subpart D—Zinc Casting Subcategory

- 464.40 Applicability; description of the zinc casting subcategory.
- 464.41 Specialized definitions.
- 464.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 464.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 464.44 New source performance standards.
- 464.45 Pretreatment standards for existing sources.
- 464.46 Pretreatment standards for new sources.
- 464.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best

conventional pollutant control technology. [Reserved]

AUTHORITY: Secs. 301, 304 (b), (c), (e), and (g), 306 (b) and (c), 307, 308, and 501 of the Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the "Act"); 33 U.S.C. 1311, 1314 (b), (c), (e) and (g), 1316 (b) and (c), 1317 (b) and (c), 1318, and 1361; 86 Stat. 816, Pub. L. 92–500; 91 Stat. 1567, Pub. L. 95–217.

SOURCE: 50 FR 45247, Oct. 30, 1985, unless otherwise noted.

#### GENERAL PROVISIONS

#### § 464.01 Applicability.

(a) This part applies to metal molding and casting facilities that discharge or may discharge pollutants to waters of the United States or that introduce pollutants into a publicly owned treatment works.

#### § 464.02 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

- (a) Aluminum casting. The remelting of aluminum or an aluminum alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary and secondary) metals manufacturing (40 CFR part 421) and aluminum forming (40 CFR part 467). Processing operations following the cooling of castings not covered under aluminum forming, except for grinding scrubber operations which are covered here, are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).
- (b) Copper casting. The remelting of copper or a copper alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary and secondary) metals manufacturing (40 CFR part 421). Also excluded are casting of beryllium alloys in which beryllium is present at 0.1 or greater percent by weight and precious metals alloys in which the precious metal is present at 30 or greater percent by weight. Except for grinding scrubber operations which are covered

here, processing operations following the cooling of castings are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).

- (c) Ferrous casting. The remelting of ferrous metals to form a cast intermediate or finished product by pouring the molten metal into a mold. Except for grinding scrubber operations which are covered here, processing operations following the cooling of castings are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).
- (d) Zinc casting. The remelting of zinc or zinc alloy to form a cast intermediate or final product by pouring or forcing the molten metal into a mold, except for ingots, pigs, or other cast shapes related to nonferrous (primary) metals manufacturing (40 CFR part 421) and nonferrous metals forming (40 CFR part 471). Processing operations following the cooling of castings not covered under nonferrous metals forming are covered under the electroplating and metal finishing point source categories (40 CFR parts 413 and 433).
- (e) *POTW* shall mean "publicly owned treatment works."
- (f) A non-continuous discharger is a plant which does not discharge pollutants during specific periods of time for reasons other than treatment plant upset, such periods being at least 24 hours in duration. A typical example of a non-continuous discharger is a plant where wastewaters are routinely stored for periods in excess of 24 hours to be treated on a batch basis. For non-continuous discharging direct discharging plants, NPDES permit authorities shall apply the mass-based annual average effluent limitations or standards and the concentration-based maximum day and maximum for monthly average effluent limitations or standards established in the regulations. POTWs may elect to establish concentration-based standards for non-continuous discharges to POTWs. They may do so by establishing concentration-based pretreatment standards equivalent to the mass-based standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46 of the regulations. Equivalent concentration stand-

ards may be established by following the procedures outlined in §464.03(b).

- (g) *Total phenols* shall mean total phenolic compounds as measured by the procedure listed in 40 CFR part 136 (distillation followed by colorimetric—4AAP).
- (h)  $Sm^3$  shall mean standard cubic meters.
- (i) SCF shall means standard cubic feet.
- (j) Total toxic organics (TTO) shall mean the sum of the mass of each of the toxic organic compounds which are found at a concentration greater than 0.010 mg/l. The specialized definitions for each subpart contain a discrete list of toxic organic compounds comprising TTO for each process segment in which TTO is regulated.

# § 464.03 Monitoring and reporting requirements.

- (a) As an alternative to monitoring for TTO (total toxic organics), an indirect discharging plant may elect to monitor for Oil and Grease instead. Compliance with the Oil and Grease standard shall be considered equivalent to complying with the TTO standard. Alternate Oil and Grease standards are provided as substitutes for the TTO standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46
- (b) POTWs may establish concentration standards rather than mass standards, but must ensure that the concentration standards are exactly equivalent to the mass-based standards provided in §§ 464.15, 464.16, 464.25, 464.26, 464.35, 464.36, 464.45, and 464.46. Equivalent concentration standards may be determined by multiplying the massbased standards included in the regulations by an appropriate measurement of average production, raw material usage, or air scrubber flow (kkg of metal poured, kkg of sand reclaimed, standard cubic meters of air scrubbed) and dividing by an appropriate measure of average discharge flow to the POTW, taking into account the proper conversion factors to ensure that the units (mg/l) are correct.
- (c) The ''monthly average'' regulatory values shall be the basis for the monthly average effluent limitations

guidelines and standards in direct discharge permits and for pretreatment standards. Compliance with the monthly average effluent limitations guidelines and standards is required regardless of the number of samples analyzed and averaged.

#### § 464.04 Compliance date for PSES.

The compliance date of PSES is October 31, 1988.

# Subpart A—Aluminum Casting Subcategory

# §464.10 Applicability; description of the aluminum casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from aluminum casting operations as defined in  $\S464.02(a)$ .

# $\S 464.11$ Specialized definitions.

For the purpose of this subpart:

- (a) *Total toxic organics (TTO)*. TTO is a regulated parameter under PSES (§ 464.15) and PSNS (§ 464.16) for the aluminum subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:
- (1) Casting Quench (§464.15(b) and §464.16(b)):
- 4. benzene
- 21. 2,4,6-trichlorophenol
- 22. Para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene
- (2) Die Casting (§ 464.15(c) and § 464.16(c)):
- 1. acenaphthene
- 4. benzene
- 7. chlorobenzene
- 11. 1,1,1-trichloroethane
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene

- 44. methylene chloride (dichloromethane)
- 55. naphťhalene
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 72. benzo (a)anthracene (1,2-benzanthracene)
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 76. chrysene
- 78. anthracene
- 80. fluorene 81. phenanthrene
- 84. pyrene
- 85. tetrachloroethylene
- 86. toluene

# (3) Dust Collection Scrubber (§ 464.15(d) and § 464.16(d)):

- 1. acenaphthene
- 21. 2,4,6-trichlorophenol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 84. pyrene

# (4) Investment Casting ( $\S464.15(f)$ and $\S464.16(f)$ ):

- 11. 1,1,1-trichloroethane
- 23. chloroform (trichloromethane)
- 44. methylene chloride (dichloromethane)
- 66. bis (2-ethylhexyl) phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene

# (5) Melting Furnace Scrubber (§ 464.15(g) and § 464.16(g)):

- 1. acenaphthene
- 21. 2,4,6-trichlorophenol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 73. benzo (a)pyrene (3,4-benzopyrene)
- 84. pyrene

# (6) Mold Cooling (§ 464.15(h) and § 464.16(h)):

- 4. benzene
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 39. fluoranthene

- 44. methylene chloride
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 84. pyrene
- 85. tetrachloroethylene
- 87. trichloroethylene

#### § 464.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/ billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitation and annual average mass limitation shall only apply to non-continuous dischargers.

# (a) Casting Cleaning Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)	0.0771	0.0421	
Lead (T)	0.0791	0.039	
Zinc (T)	0.114	0.0431	
Oil & grease	3.0	1.0	
TSS	3.80	1.50	
pH	(¹)	(¹)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.00 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T)  Lead (T)  Zinc (T)  Oil & grease  TSS	(mg/l) <sup>2</sup> 0.77 0.79 1.14 30 38	(mg/l) <sup>2</sup> 0.42 0.39 0.43 10 15	0.017 0.022 0.027 0.501 1.0
pH	( <sup>3</sup> )	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

#### (b) Casting Quench Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of met poured		
Copper (T)	0.0093 0.0096 0.0138 0.363 0.46 (1)	0.0051 0.0047 0.0052 0.121 0.182 (¹)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.77 0.79 1.14 30 38 ( <sup>3</sup> )	(mg/l) <sup>2</sup> 0.42 0.39 0.43 10 15 ( <sup>3</sup> )	0.0021 0.0027 0.0033 0.0605 0.121

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly av age	
	kg/1,000 kkg (pounds per n lion pounds) of me poured	
_		
Copper (T)	0.0066	0.0036
Lead (T)	0.0068	0.0034
Zinc (T)	0.0098	0.0037
Total Phenols	0.0074	0.0026
Oil & Grease	0.259	0.0864
TSS	0.33	0.13
pH	( <sup>1</sup> )	(1)

<sup>&</sup>lt;sup>1</sup> With the range of 7.0 to 10.0 at all times.

<sup>(</sup>c) Die Casting Operations.

# 40 CFR Ch. I (7-1-99 Edition)

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
	(mg/l) ( <sup>2</sup> )	(mg/l) ( <sup>2</sup> )	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total Phenols	0.86	0.3	0.0017
Oil & Grease	30	10	0.0432
TSS	38	15	0.0864
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup>These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (d) Dust Collection Scrubber Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air	
Copper (T) Lead (T) Zinc (T)	0.231 0.237 0.343	0.126 0.117 0.129	
Total Phenols	0.258 9.01	0.09 3.0	
TSS	11.4	4.51	
pH	(¹)	(¹)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Max- imum for monthly average	Annual av- erage <sup>1</sup>
	(mg/l) <sup>2</sup>	mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0511
Lead (T)	0.79	0.39	0.0661
Zinc (T)	1.14	0.43	0.0811
Total Phenols	0.86	0.3	0.0601
Oil & Grease	30	10	1.5
TSS	38	15	3.0
pH	(3)	(3)	(3)

### (e) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

# (f) Investment Casting.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)	8.48	4.63	
Lead (T)	8.7	4.3	
Zinc (T)	12.6	4.74	
Oil and grease	330	110	
TSS	419	165	
pH	(1)	(1)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
0.77	0.42	1.87
0.79	0.39	2.42
1.14	0.43	2.97
30	10	55.1
38	15	110
(3)	(3)	(3)
	for any 1 day (mg/l) <sup>2</sup> 0.77 0.79 1.14 30 38	for any 1 day average (mg/l) <sup>2</sup> 0.42 0.79 0.39 1.14 0.43 30 10 38 15

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/k) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

<sup>3</sup>Within the range of 7.0 to 10.0 at all times.

# (g) Melting Furnace Scrubber Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air	
Copper (T)	3.01 3.09 4.45 3.36 117 148 (1)	1.64 1.52 1.68 1.17 39.1 58.6 (¹)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

_			
	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.664
Lead (T)	0.79	0.39	0.859
Zinc (T)	1.14	0.43	1.05
Total phenols	0.86	0.3	0.781
Oil and grease	30	10	19.5
TSS	38	15	39.1
pH	(2)	(3)	(3)

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times,

<sup>1</sup> kg/62.3 million SM³ (pounds per billion SCF) of air scrubbed.

2 These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

3 Within the range of 7.0 to 10.0 at all times.

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.
²These concentrations must be multiplied by the ratio of (0.468/x) where x is the acutal normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

#### (h) Mold Cooling Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)	0.297 0.305 0.44 11.6 14.7	0.162 0.151 0.166 3.86 5.79	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
	(mg/l) <sup>1</sup>	(mg/) <sup>1</sup>	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104
Oil and grease	30	10	1.93
TSS	38	15	3.86
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal
 ²These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
 ³Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

#### § 464.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available to nology economically achievable. tech-

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm³ or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous chargers, annual average mass limita-

tions and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

### (a) Casting Cleaning Operations.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T) Lead (T) Zinc (T)	0.0771 0.0791 0.114	0.0421 0.039 0.0431

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.017
Lead (T)	0.79	0.39	0.022
Zinc (T)	1.14	0.43	0.027

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (12/x), where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (b) Casting Quench Operations.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured		
Copper (T)	0.0093	0.0051	
Lead (T)	0.0096	0.0047	
Zinc (T)	0.0138 0.00		

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0021
Lead (T)	0.79	0.39	0.0027
Zinc (T)	1.14	0.43	0.0033

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured. <sup>2</sup>These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (c) Die Casting Operations.

# 40 CFR Ch. I (7-1-99 Edition)

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)	0.0066	0.0036	
Lead (T)	0.0068	0.0034	
Zinc (T)	0.0098	0.0037	
Total Phenols	0.0074 0		

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total Phenols	0.86	0.3	0.0017

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (d) Dust Collection Scrubber Operations.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm³ (pounds SCF) of air
Copper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total Phenols	0.258	0.09

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Copper (T)  Lead (T)  Zinc (T)  Total Phenols	(mg/l) <sup>2</sup> 0.77 0.79 1.14 0.86	(mg/l) <sup>2</sup> 0.42 0.39 0.43 0.3	0.0511 0.0661 0.0811 0.0601

# (e) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

# (f) Investment Casting.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per n lion pounds) of me poured	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.77 0.79 1.14	(mg/l) <sup>2</sup> 0.42 0.39 0.43	1.87 2.42 2.97

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

### (g) Melting Furnace Scrubber Operations.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm³ (pounds SCF) of air
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.664
Lead (T)	0.79	0.39	0.859
Zinc (T)	1.14	0.43	1.05
Total phenols	0.86	0.3	0.781

# (h) Mold Cooling Operations.

<sup>&</sup>lt;sup>1</sup>kg/62.3 million Sm³ (lb per billion SCF) of air scrubbed.
<sup>2</sup>These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed
²These concentrations must be multiplied by the ratio of (0.468/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured	
Copper (T) Lead (T) Zinc (T)	0.297 0.305 0.44	0.162 0.151 0.166

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

# § 464.14 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million  $\rm Sm^3$  or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) Casting Cleaning Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per i lion pounds) of me poured		
Copper (T) Lead (T)	0.0771 0.0791	0.0421 0.039	
Zinc (T)	0.114	0.0431	
Oil and grease	3.0	1.0	
TSS	3.8	1.5	
pH	(1)	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly aver- age	Annual av- erage <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.017
Lead (T)	0.79	0.39	0.022
Zinc (T)	1.14	0.43	0.027
Oil and grease	30	10	0.501
TSS	38	15	1.0
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
 ²These concentrations must be multiplied by the ratio of (12/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
 ³Within the range of 7.0 to 10.0 at all times.

# (b) Casting Quench Operations.

#### NSPS

140	1 3	
Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per lion pounds) of m poured	
Copper (T) Lead (T)	0.0093 0.0096	0.0051 0.0047
Zinc (T)	0.0138 0.363	0.0052 0.121
Oil and grease TSS	0.363	0.121
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0021
Lead (T)	0.79	0.39	0.0027
Zinc (T)	1.14	0.43	0.0033
Oil and grease	30	10	0.0605
TSS	38	15	0.121
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (1.45/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³ Within the range of 7.0 to 10.0 at all times.

### (c) Die Casting Operations.

# **NSPS**

Pollutant or pollutant property	Maximum for one 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Copper (T)	0.0066	0.0036	
Lead (T)	0.0068	0.0034	
Zinc (T)	0.0098	0.0037	
Total Phenols	0.0074	0.0026	
Oil and grease	0.259	0.0864	
TSS and	0.33 0.13		
pH	(1) (1)		

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total phenols	0.86	0.3	0.0017
Oil and grease	30	10	0.0432
TSS and	38	15	0.0864
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured)
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

### (d) Dust Collection Scrubber Operations.

# **NSPS**

Pollutant of pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/62.3 million Sm <sup>3</sup> (pound per billion SCF) of air scrubb	
Cooper (T)	0.231	0.126
Lead (T)	0.237	0.117
Zinc (T)	0.343	0.129
Total phenols	0.258	0.09
Oil and grease	9.01	3.0
TSS	11.4	4.51
pH	(¹)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Cooper (T)	0.77	0.42	0.0511
Lead (T)	0.79	0.39	0.0661
Zinc (T)	1.14	0.43	0.0811
Total phenols	0.86	0.3	0.0601
Oil and grease	30	10	1.5
TSS	38	15	3.0
pH	(3)	(3)	(3)

#### (e) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

#### (f) Investment Casting.

# NSPS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		(pounds per of metal poured
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
Oil and grease	330	110
TSS	419	165
pH	( <sup>1</sup> )	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.14	0.43	2.97
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured

<sup>&</sup>lt;sup>1</sup> kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.
<sup>2</sup> These concentrations must be multiplied by the ratio of (0.036/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>2</sup>These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

<sup>3</sup>Within the range of 7.0 to 10.0 at all times.

#### (g) Melting Furnace Scrubber Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds of air scrubbed
O (T)	0.04	4.04
Copper (T)	3.01	1.64
Lead (T)	3.09	1.52
Zinc (T)	4.45	1.68
Total phenols	3.36	1.17
Oil and grease	117	39.1
TSS	148	58.6
pH	(1)	(1)

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
0.77	0.42	0.664
0.79	0.39	0.859
1.14	0.43	1.05
0.86	0.3	0.781
30	10	19.5
38	15	39.1
(3)	(3)	(3)
	(mg/l) <sup>2</sup> 0.77 0.79 1.14 0.86 30 38	for any 1 for monthly average (mg/l) 2 (mg/l) 2 0.77 0.42 0.79 0.39 1.14 0.43 0.86 0.3 30 10 38 15

 $^{1}\mbox{kg/62.3}$  million  $\mbox{Sm}^{\,3}$  (pounds per billion SCF) of air scrubbed.

<sup>2</sup>These concentrations must be multiplied by the ratio of (0.468/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a process of a constant of the control of t

specific plant.

3 Within the range of 7.0 to 10.0 at all times.

# (h) Mold Cooling Operations.

### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
		(pounds per of metal poured	
Copper (T)	0.297	0.162	
Lead (T)	0.305	0.151	
Zinc (T)	0.44	0.166	
Oil and grease	11.6	3.86	
TSS	14.7	5.79	
pH	(1)	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0656
Lead (T)	0.79	0.39	0.0849
Zinc (T)	1.14	0.43	0.104
Oil and grease	30	10	1.93
TSS	38	15	3.86
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds of metal poured. <sup>2</sup> These concentrations must be multiplied by the ratio of (46.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a spe-cific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

### $\S 464.15$ Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

# (a) Casting Cleaning Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T) Lead (T) Zinc (T)	0.0771 0.0791 0.114	0.0421 0.039 0.0431

#### (b) Casting Quench Operation.

### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of n poured		
Copper (T)	0.0093 0.0096 0.0138 0.029	0.0051 0.0047 0.0052 0.0095	
Oil and grease (for alternate monitoring)	0.363	0.121	

(c) Die Casting Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of met poured	
Copper (T) Lead (T) Zinc (T) Total phenols TTO Oil and grease (for alternate	0.0066 0.0068 0.0098 0.0074 0.0308	0.0036 0.0034 0.0037 0.0026 0.01
monitoring)	0.259	0.0864

# (d) Dust Collection Scrubber Operations.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds of air scrubbed
Copper (T) Lead (T) Zinc (T) Total phenols TTO Oil and grease (for alter-	0.231 0.237 0.343 0.258 0.613	0.126 0.117 0.129 0.09 0.2
nate monitoring)	9.01	3.00

- (e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.
  - (f) Investment Casting.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured		
Copper (T) Lead (T) Zinc (T)	8.48 8.7 12.6	4.63 4.3 4.74	
TTO Oil and grease (for alternate monitoring	18.1 330	5.91 110	

(g) Melting Furnace Scrubber Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	r Maximum for monthly average	
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air	
Copper (T) Lead (T)	3.01 3.09	1.64 1.52	
Zinc (T)	4.45	1.68	
Total phenols	3.36 7.97	1.17 2.6	
Oil and grease (for alternate monitoring)	117	39.1	

# (h) Mold Cooling Operations.

# **PSES**

erty		
Copper (T)		
,	kg/1,000 kkg (pounds per million pounds) of metal poure	
Zinc (T)  TTO  Oil and grease (for alter-	0.297 0.305 0.44 0.935	0.162 0.151 0.166 0.304
nate monitoring)	11.6	3.86

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16, 1986]

# \$464.16 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

# (a) Casting Cleaning Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Copper (T) Lead (T) Zinc (T)	0.0771 0.0791 0.114	0.0421 0.039 0.0431	

(b) Casting Quench Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per mi lion pounds) of met poured	
Copper (T) Lead (T) Zinc (T)	0.0093 0.0096 0.0138	0.0051 0.0047 0.0052
TTO	0.029	0.0095
Oil and grease (for alternate monitoring)	0.363	0.121

# (c) Die Casting Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of met poured		
Copper (T)	0.0066 0.0068 0.0098 0.0074 0.0308	0.0036 0.0034 0.0037 0.0026 0.01	
monitoring)	0.259	0.0864	

# $\begin{array}{cccc} \hbox{(d)} & \textit{Dust} & \textit{Collection} & \textit{Scrubber} & \textit{Operations}. \end{array}$

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed	
Copper (T) Lead (T)	0.231 0.237	0.126 0.117
Zinc (T)	0.343	0.129
Total Phenols	0.258	0.09
TTO	0.613	0.2
Oil and grease (for alternate monitoring)	9.01	3.0

- (e) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.
  - (f) Investment Casting.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T) Lead (T)	8.48 8.7	4.63 4.3	
Zinc (T)	12.6	4.74	
TTO	18.1	5.91	
Oil and grease (for alternate			
monitoring)	330	110	

(g) Melting Furnace Scrubber Operations.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air
Copper (T) Lead (T) Zinc (T) Total Phenols TTO Oil and grease (for alternate	3.01 3.09 4.45 3.36 7.97	1.64 1.52 1.68 1.17 2.6
monitoring)	117	39.1

# (h) Mold Cooling Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age	
	kg/1,000 kkg (pounds per million pounds) of metal poure		
Copper (T)	0.297 0.305 0.44 0.935	0.162 0.151 0.166 0.304	

§ 464.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

# Subpart B—Copper Casting Subcategory

# § 464.20 Applicability; description of the copper casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction

of pollutants into publicly owned treatment works resulting from copper casting operations as defined in §464.02(b).

# § 464.21 Specialized definitions.

For the purpose of this subpart:

- (a) Total Toxic Organics (TTO). TTO is a regulated parameter under PSES (§ 464.25) and PSNS (§ 464.26) for the copper subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:
- (1) Casting Quench (§464.25(a) and § 464.26(a)):
- 23. chloroform (trichloromethane)
- 64. pentachlorophenol
- 66. bis(2-ethylhexyl)phthalate
- 71. dimethyl phthalate
- Collection Dust Scrubbers (§ 464.25(c) and 464.26(c)):
- 1. acenaphthene
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 55. naphthalene
- 58. 4-nitrophenol
- 64. pentachlorophenol
- 65. phenol
- 66. bis(2-ethylhexyl)phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 71. dimethyl phthalate
- 72. benzo(a)anthracene (1,2-benzanthracene) 74. 3,4-benzofluoranthene
- 75. benzo(k) fluoranthene
- 76. chrysene
- 77. acenaphthylene
- 78. anthracene
- 81. phenanthrene
- 84. pyrene
- (3) Investment Casting (§464.25(e) and §464.26(e)):
- 1. acenaphthene
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2.4-dimethylphenol
- 55. naphthalene
- 58. 4-nitrophenol
- 64. pentachlorophenol
- 65. phenol
- 66. bis (2-ethylhexyl)phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 71. dimethyl phthalate
- 72. benzo(a)anthracene (1,2-benzanthracene)
- 74. 3.4-benzofluoranthene
- 75. benzo(k) fluoranthene
- 76. chrysene
- 77. acenaphthylene

- 78 anthracene
- 81. Phenanthrene
- 84. pyrene
- Melting Furnace Scrubber (§ 464.25(f) and § 464.26(f)):
- 1. acenaphthene
- 22. para-chloro meta-cresol
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- 55. naphthalene
- 58. 4-nitrophenol
- 64. pentachlorophenol
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 71. dimethyl phthalate
- 72 benzo(a)anthracene (1.2-benzanthracene)
- 74. 3.4-benzoflouranthene
- 75. benzo(k) flouranthene
- 76. chrysene
- 77. acenaphthylene
- 78. anthracene
- 81. phenanthrene
- 84. pyrene
- (5) Mold Cooling (§ 464.25(g) § 464.26(g)):
- 23. chloroform (trichloromethane)
- 64. pentachlorophenol
- 66. bis(2-ethylhexyl)phthalate
- 71. dimethyl phthalate

# § 464.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/ billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall

only apply to non-continuous dischargers.

(a) Casting Quench Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly av age	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured	
Copper (T)	0.0307 0.0315 0.0455 1.2 1.52	0.0168 0.0156 0.0171 0.399 0.598

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T)	(mg/l) <sup>2</sup> 0.77 0.79 1.14 30 38 ( <sup>3</sup> )	(mg/l) <sup>2</sup> 0.42 0.39 0.43 10 15 ( <sup>3</sup> )	0.0068 0.0088 0.0108 0.199 0.399 ( <sup>3</sup> )

<sup>1</sup> kg/1000 kkg (pounds per million pounds) of metal poured
2 These concentrations must be multiplied by the ratio of
(4.8/x) where x is the actual normalized process wastewater
flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

# (b) Direct Chill Casting Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage		
	kg/1,000 kkg (pounds per million pounds) of metal poure		
Copper (T)	0.928 0.952 1.37 36.2 45.8 (1)	0.506 0.47 0.518 12.1 18.1 (1)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T)	(mg/l) <sup>2</sup> 0.77 0.79 1.14 30 38 ( <sup>3</sup> )	(mg/l) <sup>2</sup> 0.42 0.39 0.43 10 15 (3)	0.205 0.265 0.326 6.03 12.1

<sup>1</sup> kg/1000 kkg (pounds per million pounds) of metal poured.

2 These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

# (c) Dust Collection Scrubber Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds per f air scrubbed
Copper (T)	0.553 0.567 0.818 0.617 21.5 27.3	0.301 0.28 0.309 0.215 7.18 10.8 (1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.122
Lead (T)	0.79	0.39	0.158
Zinc (T)	1.14	0.43	0.194
Total phenols	0.86	0.3	0.144
Oil and grease	30	10	3.59
TSS	38	15	7.18
pH	(3)	(3)	(3)

<sup>1</sup>kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

# (d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

# (e) Investment Casting.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (pounds per million pounds) of metal pour	
Copper (T)	8.48	4.63
Lead (T)	8.7	4.3
Zinc (T)	12.6	4.74
Oil and grease	330	110
TSS	419	165
pH	( <sup>1</sup> )	( <sup>1</sup> )

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

<sup>2</sup>These concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	1.87
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.14	0.43	2.97
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (f) Melting Furnace Scrubber Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/62.3 million S billion SCF) o	
Copper (T)	1.81 1.86 2.68 2.02 70.6 89.4 (¹)	0.988 0.918 1.01 0.706 23.5 35.3 (¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
0.77	0.42	0.4
0.79	0.39	0.518
1.14	0.43	0.635
0.86	0.3	0.467
30	10	11.8
38	15	23.5
(3)	(3)	(3)
	(mg/l) <sup>2</sup> 0.77 0.79 1.14 0.86 30 38	for any 1 for monthly average  (mg/l) <sup>2</sup> (mg/l) <sup>2</sup> 0.77 0.42 0.79 0.39 1.14 0.43 0.86 0.3 30 10 38 15

 $<sup>^{\</sup>rm 1}\,\text{kg/}62.3$  million  $\text{Sm}^{\rm 3}$  (pound per billion SCF) of air scrubbed.

# (g) Mold Cooling Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal pour		
Copper (T) Lead (T) Zinc (T)	0.392 0.402 0.58	0.214 0.199 0.219	
Oil and grease	15.3 19.3	5.09 7.63	
pH	(1)	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.79	0.39	0.112
Zinc (T)	1.14	0.43	0.137
Oil and grease	30	10	2.54
TSS	38	15	5.09
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (61/k) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21760, June 16. 1986]

# § 464.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the applica-tion of the best available tech-nology economically achievable.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous discharges, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

#### (a) Casting Quench Operations.

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant

specific plant.

3 Within the range of 7.0 to 10.0 at all times.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds pe million pounds) of meta poured	
Copper (T)	0.0307	.0168
Lead (T)	0.0211	.0104
Zinc (T)	0.0303	.0116

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0068
Lead (T)	0.53	0.26	0.006
Zinc (T)	0.76	0.29	0.0072

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured.

<sup>2</sup>These concentrations must be multiplied by the ratio of (4.8/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (b) Direct Chill Casting Operations.

# BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured		
Copper (T)	0.928	0.506	
Lead (T)	0.639	0.314	
Zinc (T)	0.916	0.35	

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.205
Lead (T)	0.53	0.26	0.181
Zinc (T)	0.76	0.29	0.217

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (c) Dust Collection Scrubber Operations.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed	
Copper (T)	0.553	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total phenols	0.617	0.215

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
Copper (T)  Lead (T)  Zinc (T)  Total phenols	(mg/l) <sup>2</sup> 0.77 0.53 0.76 0.86	(mg/l) <sup>2</sup> 0.42 0.26 0.29 0.3	0.122 0.108 0.129 0.144

 $<sup>^{1}\</sup>mbox{kg/}62.3$  million  $\mbox{Sm}^{3}$  (pounds per billion SCF) of air scrubbed.

# (d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to navigable waters.

#### (e) Investment Casting.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1000 kkg (pounds per million pounds) of metal poured	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.77 0.53 0.76	(mg/l) <sup>2</sup> 0.42 0.26 0.29	1.87 1.65 1.98

¹kg/1000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (f) Melting Furnace Scrubber Operations.

 $<sup>^2\</sup>text{These}$  concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly ave age	
	kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed	
Copper (T)	1.81 1.25 1.79 2.02	0.988 0.612 0.673 0.706

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T) Total phenols	(mg/l) <sup>2</sup> 0.77 0.53 0.76 0.86	(mg/l) <sup>2</sup> 0.42 0.26 0.29 0.3	0.4 0.353 0.424 0.471

#### (g) Mold Cooling Operations.

### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.53	0.26	0.0763
Zinc (T)	0.76	0.29	0.0916

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (61/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a spe-

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

#### § 464.24 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/

billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

# (a) Casting Quench Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per r lion pounds) of me poured	
Copper (T)	0.0307	0.0168
Lead (T)	0.0211	0.0104
Zinc (T)	0.0303	0.0116
Oil and grease	1.2	0.399
TSS	0.598	0.479
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0068
Lead (T)	0.53	0.26	0.006
Zinc (T)	0.76	0.29	0.0072
Oil and grease	30	10	0.199
TSS	15	12	0.104
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured. <sup>1</sup> kg/1,000 kkg (pounds per million pounds) or metal poured. <sup>2</sup> These concentrations must be multiplied by the ratio of (4.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a spe-cific plant. <sup>3</sup> Within the range of 7.0 to 10.0 at all times.

#### (b) Direct Chill Casting Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal pour	
Copper (T)	0.928	0.506
Lead (T)	0.639	0.314
` '		
Zinc (T)	0.916	0.35
Oil and grease	36.2	12.1
TSS	18.1	14.5
pH	( <sup>1</sup> )	(¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

<sup>1</sup> kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

2 These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.205
Lead (T)	0.53	0.26	0.181
Zinc (T)	0.76	0.29	0.217
Oil and grease	30	10	6.03
TSS	15	12	3.13
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (145/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³ Within the range of 7.0 to 10.0 at all times.

### (c) Dust Collection Scrubber Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds of air scrubbed
O(T)	0.550	0.004
Copper (T)	0.553	0.301
Lead (T)	0.38	0.187
Zinc (T)	0.545	0.208
Total phenols	0.617	0.215
Oil and grease	21.5	7.18
TSS	10.8	8.61
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.122
Lead (T)	0.53	0.26	0.108
Zinc (T)	0.76	0.29	0.129
Total phenols	0.86	0.3	0.144
Oil and grease	30	10	3.59
TSS	15	12	1.87
pH	(3)	(3)	(3)

 $<sup>^{1}\</sup>mbox{kg/62.3}$  million  $\mbox{Sm}^{\,3}$  (pounds per billion SCF) of air scrubbed.

(d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

# (e) Investment Casting.

# **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per n lions pounds) of metal poure	
Copper (T)	8.48 5.84 8.37 330 165 (1)	4.63 2.86 3.19 110 132 (¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T) Oil and grease TSS	(mg/l) <sup>2</sup> 0.77 0.53 0.76 30 15 ( <sup>3</sup> )	mg/l) <sup>2</sup> 0.42 0.26 0.29 10 12 (3)	1.87 1.65 1.98 55.1 28.6

¹ kg/1,000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³ Within the range of 7.0 to 10.0 at all times.

#### (f) Melting Furnace Scrubber Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds billion SCF) of air scrubbed	
Copper (T) Lead (T) Zinc (T) Total phenols Oil and grease TSS pH	1.81 1.25 1.79 2.02 70.6 35.3 (1)	0.988 0.612 0.673 0.706 23.5 28.2 (1)

 $<sup>^{\</sup>mbox{\tiny 1}}\mbox{Within the range of 7.0 to 10.0 at all times.}$ 

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.4
Lead (T)	0.53	0.26	0.353
Zinc (T)	0.76	0.29	0.424
Total phenols	0.86	0.3	0.471
Oil and grease	30	10	11.8
TSS	15	12	6.12
pH	(3)	(3)	(3)

¹kg/62.3 Sm³ (pounds per billion SCF) of air scrubbed.
²These concentrations must be multiplied by the ratio of (0.282/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

# (g) Mold Cooling Operations.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.086/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant specific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

# **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poure	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148
Oil and grease	15.3	5.09
TSS	7.63	6.11
pH	( <sup>1</sup> )	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/1) <sup>2</sup>	(mg/1) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0865
Lead (T)	0.53	0.26	0.0763
Zinc (T)	0.76	0.29	0.0916
Oil and grease	30	10	2.54
TSS	15	12	1.32
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million pound) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (61/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

#### §464.25 Pretreatment standards for existing sources.

Except as provided in  $40\ \text{CFR}\ 403.7$ and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

# (a) Casting Quench Operations.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1000 kkg (pounds per lion pounds) of m poured		
Copper (T)	0.0307 0.0211 0.0303 0.0335	0.0168 0.0104 0.0116 0.0109	
Oil and grease (for alternate monitoring)	1.2	0.399	

### (b) Direct Chill Casting Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poure	
Copper (T) Lead (T) Zinc (T)	0.928 0.639 0.916	0.506 0.314 0.35

# (c) Dust Collection Scrubber Operations.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	6m³ (pounds per f air scrubbed
Copper (T)	0.552 0.38 0.545 0.617 1.65	0.301 0.187 0.208 0.215 0.54
nate monitoring)	21.5	7.18

(d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to a POTW.

# (e) Investment Casting.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (pounds per million pounds) of metal poure	
Copper (T)	8.48 5.84 8.37 25.4	4.63 2.86 3.19 8.29
monitoring)	330	110

### (f) Melting Furnace Scrubber Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day		
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed		
Copper (T) Lead (T) Zinc (T) Total phenols TTO Oil and grease (for alternate monitoring)	1.81 1.25 1.79 2.02 5.41	0.988 0.612 0.673 0.706 1.77	

# (g) Mold Cooling Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage	
	kg/1,000 kkg (pounds per million pounds) of metal pour	
Copper (T)	0.392	0.214
Lead (T)	0.27	0.132
Zinc (T)	0.387	0.148
TTO	0.428	0.14
Oil and grease (for alter-		
nate monitoring)	15.3	5.09

# $\$\,464.26$ Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

# (a) Casting Quench Operations.

# PSNS

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Copper (T)  Lead (T)  Zinc (T)  TTO	0.0307 0.0211 0.0303 0.0335	0.0168 0.0104 0.0116 0.0109	
Oil and grease (for alternate monitoring)	1.2	0.399	

# (b) Direct Chill Casting Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poure	
Copper (T)	0.928 0.639 0.916	0.506 0.314 0.35

(c) Dust Collection Scrubber Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly av age	
	kg/62.3 Million Sm³ (pounds pounds pounds pounds) of air scrubbed	
Copper (T)  Lead (T)  Zinc (T)  Total Phenols  TTO  Oil and Grease (for alter-	0.552 0.38 0.545 0.617 1.65	0.301 0.187 0.208 0.215 0.54
nate monitoring	21.5	7.18

(d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.

# (e) Investment Casting.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per n lion pounds) of metal poure	
Copper (T)	8.48	4.63
Lead (T)	5.84	2.86
Zinc (T)	8.37	3.19
TTO `	25.4	8.29
Oil and Grease (for alternate		
monitoring	330	110

# (f) Melting Furnace Scrubber Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly av age	
	kg/62.3 million Sm³ (pounds pe billion SCF) of air scrubbed	
Coppor (T)	1.81	0.988
Copper (T)		0.900
Lead (T)	1.25	0.612
Zinc (T)	1.79	0.673
Total Phenols	2.02	0.706
TTO	5.41	1.77
Oil and Grease (for alter-		
nate monitoring	70.6	23.5

(g) Mold Cooling Operations.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poure		
Copper (T)	0.392 0.27 0.387 0.428	0.214 0.132 0.148 0.14	
nate monitoring	15.3	5.09	

§ 464.27 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

# Subpart C—Ferrous Casting Subcategory

#### § 464.30 Applicability; description of the ferrous casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from ferrous casting operations as defined § 464.02(c).

# § 464.31 Specialized definitions.

For the purpose of this subpart:

- (a) Total Toxic Organics (TTO). TTO is a regulated parameter under PSES (§464.35) and PSNS (§464.36) for the ferrous subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:
- (1) Casting Quench (§464.35(b) and §464.36(b)):
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- Dust Scrubber Collection (§464.35(c) and §464.36(b)):
- 1. acenaphthene
- 23. chloroform (trichloromethane)
- 31. 2,4-dichlorophenol
- 34. 2.4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 64. pentachlorophenol
- 65. phenol
- 66. bis(2-ethylhexyl)phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate

- 71. dimethyl phthalate
- 72. benzo (a)anthracene (1,2-benzanthracene)
- 76. chrysene
- 77. acenaphthylene
- 78. anthracene
- 80. fluorene
- 81. phenanthrene
- 84. pyrene
- (3) Investment Casting (§464.35(e) and §464.36(e)):
- 23. chloroform (trichloromethane)
- 44. methylene chloride (dichloromethane)
- 66. bis (2-ethylhexyl) phthalate
- 77. acenaphthylene
- 84. pyrene
- (4) Melting Furnace Scrubber (§ 464.35(f) and § 464.36(f)):
- 23. chloroform (trichloromethane)
- 31. 2,4-dichlorophenol
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 67. butyl benzyl phthalate
- 68. di-n-butyl phthalate
- 72. benzo (a) anthracene (1,2-benzanthracene)
- 76. chrysene 77. acenaphthylene
- 78. anthracene
- 80. fluorene
- 81. phenanthrene 84. pyrene
- Mold Cooling (§464.35(g) and §464.36(g)):
- 23. chloroform (trichloromethane)
- 34. 2,4-dimethylphenol
- Slag Quench (§ 464.35(h) and § 464.36(h)):
- 34. 2,4-dimethylphenol
- 71. dimethyl phthalate
- (7) Wet Sand Reclamation (§464.35(i) and § 464.36(i)):
- 1. acenaphthene
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate 70. diethyl phthalate
- 71. dimethyl phthalate
- 72. benzo(a)anthracene (1,2-benzanthracene)
- 77. acenaphthylene
- (b) Cast Iron. An iron containing carbon in excess of the solubility in the austentite that exists in the alloy at the eutectic temperature. Cast iron also is defined here to include any iron-

carbon alloys containing 1.2 percent or more carbon by weight.

- (c) Ductile Iron. A cast iron that has been treated while molten with a master alloy containing an element such as magnesium or cerium to induce the formation of free graphite as nodules or spherules, which imparts a measurable degree of ductility to the cast metal.
- (d) *Gray Iron.* A cast iron that gives a gray fracture due to the presence of flake graphite.
- (e) Malleable Iron. A cast iron made by a prolonged anneal of white cast iron in which decarburization or graphitization, or both, take place to eliminate some or all of the cementite. Graphite is present in the form of temper carbon.
- (f) Steel. An iron-base alloy containing carbon, manganese, and often other alloying elements. Steel is defined here to include only those ironcarbon alloys containing less than 1.2 percent carbon by weight.
- (g) The "primary metal cast" shall mean the metal that is poured in the greatest quantity at an individual plant.
- (h) Multiple Ferrous Melting Furnace Scrubber Configuration. A multiple ferrous melting furnace scrubber configuration is a configuration where two or more discrete wet scrubbing devices are employed in series in a single melting furnace exhaust gas stream. The ferrous melting furnace scrubber mass allowance shall be given to each discrete wet scrubbing device that has an associated wastewater discharge in a multiple ferrous melting furnace scrubber configuration. The mass allowance for each discrete wet scrubber shall be identical and based on the air flow of the exhaust gas stream that passes through the multiple scrubber configuration.
- (i) Discrete Wet Scrubbing Device. A discrete wet scrubbing device is a distinct, stand-alone device that removes particulates and fumes from a contaminated gas stream by bringing the gas stream into contact with a scrubber liquor, usually water, and from

which there is a wastewater discharge. Examples of discrete wet scrubbing devices are: Spray towers and chambers, venturi scrubbers (fixed and variable), caps, packed bed scrubbers, quenchers, and orifice scrubbers. Semiwet scrubbing devices where water is added and totally evaporates prior to dry air pollution control are not considered to be discrete wet scrubbing devices. Ancillary scrubber operations such as fan washes and backwashes are not considered to be discrete wet scrubber devices. These ancillary operations are covered by the mass limitations of the associated scrubber. Aftercoolers are not considered to be discrete wet scrubbing devices, and water discharges from aftercooling are not regulated as a process wastewater in this category.

# § 464.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm<sup>3</sup> or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to noncontinuous dischargers.

(a) Casting Cleaning Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Copper (T)	0.0129 0.0353 0.0656 1.34 1.7	0.0071 0.0174 0.025 0.446 0.67	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179
Oil and grease	30	10	0.223
TSS	38	15	0.446
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

# (b) Casting Quench Operations

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly ave age	
	kg/1,000 kkg (pounds per mi lion pounds) of met poured	
Copper (T)	0.0138 0.0376	0.0076 0.0185
Zinc (T) Oil and grease	0.0699 1.43	0.0266 0.476
TSS	1.81 0.476	
pH	(1) (1)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019
Oil and grease	30	10	0.238
TSS	38	15	0.476
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

### (c) Dust Collection Scrubber Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly a age	
	kg/62.3 million Sm³ (pounds pounds pounds pounds) of air scrubbed	
Copper (T) Lead (T)	0.218 0.593	0.12 0.293
Zinc (T) Total phenols	1.1 0.656	0.421 0.225
Oil and grease	22.5	7.51
TSS	28.5 (1)	11.3 (¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>
0.29	0.16	0.0488
0.79	0.39	0.165
1.47	0.56	0.3
0.86	0.3	0.15
30	10	3.76
38	15	7.51
(3)	(3)	(3)
	(mg/l) <sup>2</sup> 0.29 0.79 1.47 0.86 30 38	for any 1 for monthly average (mg/l) <sup>2</sup> (mg/l) <sup>2</sup> 0.29 0.16 0.79 0.39 1.47 0.56 0.86 0.3 30 10 38 15

### (d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

# (e) Investment Casting.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	p- Maximum for any 1 day Maximum monthly ag	
	kg/1,000 kkg (pounds per million pounds) of metal pour	
Copper (T)	3.19	1.76
,		
Lead (T)	8.7	4.3
Zinc (T)	16.2	6.17
Oil and grease	330	110
TSS	419	165
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

<sup>1</sup> kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

2 These concentrations must be multiplied by the ratio (0.090/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

3 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.79	0.39	2.42
Zinc (T)	1.47	0.56	4.41
Oil and grease	30	10	55.1
TSS	38	15	110
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

### (f) Melting Furnace Scrubber Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds billion SCF) of air scrubbe	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total phenols	3.01	1.05
Oil and grease	105	35
TSS	133	52.6
pH	(¹)	(1)

<sup>&</sup>lt;sup>1</sup>Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total phenols	0.86	0.3	0.701
Oil and grease	30	10	17.5
TSS	38	15	35
pH	(3)	(3)	(3)

# (g) Mold Cooling Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal pour		
Copper (T)	0.0428 0.117 0.217 4.43 5.61	0.0236 0.0576 0.0827 1.48 2.22	

<sup>&</sup>lt;sup>1</sup>Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T) Lead (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47	(mg/l) <sup>2</sup> 0.16 0.39 0.56	0.0096 0.0325 0.0591 0.738
Oil and grease	30 38	15	1.48
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured ²These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a spe-cific plant. ³Within the range of 7.0 to 10.0 at all times.

# (h) Slag Quench Operations.

# **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Cooper (T)	0.0527	0.0291	
Lead (T)	0.144	0.0709	
Zinc (T)	0.267	0.102	
Oil and grease	5.46	1.82	
TSS	6.91	2.73	
pH	(1)	(1)	

<sup>&</sup>lt;sup>1</sup>Within the range 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47 30 38 ( <sup>3</sup> )	(mg/l) <sup>2</sup> 0.16 0.39 0.56 10 15 ( <sup>3</sup> )	0.0118 0.04 0.0728 0.909 1.82 ( <sup>3</sup> )

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wasterwater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
3 Within the range of 7.0 to 10.0 at all times.

# (i) Wet Sand Reclamation Operations.

<sup>1</sup> kg/62.3 million Sm³ (pounds per billion SCF) or air scrubbed.

2 These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

3 Within the report 7.0 to 10.0 ct all times

<sup>&</sup>lt;sup>3</sup>Within the range of 7.0 to 10.0 at all times.

**BPT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per n lion pounds) of sand claimed	
Cooper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	
Total phenols	0.642 0.	
Oil and grease		
TSS		
pH	(¹)	(1)

1 Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Cooper (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47 0.86 30 38 (3)	(mg/l) <sup>2</sup> 0.16 0.39 0.56 0.3 10 15 (3)	0.0485 0.164 0.299 0.149 3.73 7.47

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16. 1986]

# § 464.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm<sup>3</sup> or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

(a) Casting Cleaning Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per lion pounds) of r poured	
Copper (T) Lead (T) Zinc (T)	0.0129 0.0237 0.0437	0.0071 0.0116 0.0165

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.98	0.37	0.0116

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	t or pollutant property Maximum for any 1 day	
	kg/1,000 kkg (pounds per m lion pounds) of met poured	
Copper (T) Lead (T) Zinc (T)	0.0129 0.0353 0.0656	0.0071 0.0174 0.025

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0029
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.47	0.56	0.0179

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

¹kg/1,000 kkg (pounds per million pounds) of sand reclaimed.
²These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

(b) Casting Quench Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	rty Maximum for monthly		imum for thly aver- age	
	lio	00 kkg (p n pound ured		
Copper (T)		0.0138 0.0252 0.0466		0.0076 0.0124 0.0176
Mayir	mum	Movimu	.m.	Annual

	Maximum	Maximum	Annual
	for any 1	for monthly	aver-
	day	average	age <sup>1</sup>
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.29 0.53 0.98	(mg/l) <sup>2</sup> 0.16 0.26 0.37	0.0031 0.0071 0.0124

¹kg/1,000 kkg (pounds per million pounds) of metal poured. ²These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T)	0.0138 0.0376 0.0699	0.0076 0.0185 0.0266

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) Dust Collection Scrubber Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds pe billion SCF) of air scrubbed	
Copper (T)  Lead (T)  Zinc (T)  Total phenols	0.218 0.398 0.736 0.646	0.12 0.195 0.278 0.225

	Maximum	Maximum	Annual
	for any 1	for monthly	aver-
	day	average	age <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.29 0.53 0.98 0.86	(mg/l) <sup>2</sup> 0.16 0.26 0.37 0.3	0.0488 0.113 0.195 0.15

<sup>1</sup> kg/62.3 million Sm3 (pounds per billion SCF) of air

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/62.3 million Sm³ (pounds pe billion SCF) of air scrubbed	
Copper (T)  Lead (T)  Zinc (T)  Total phenols	0.218 0.593 1.1 0.656	0.12 0.293 0.421 0.225

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Copper (T) Lead (T) Zinc (T) Total phenols	(mg/l) <sup>2</sup> 0.29 0.79 1.47 0.86	(mg/l) <sup>2</sup> 0.16 0.39 0.56 0.3	0.0488 0.165 0.3 0.15

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.
²These concentrations must be multiplied by the ratio of

(d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

scrubbed.

2 These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

<sup>(0.09/</sup>x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

(e) *Investment Casting*. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poure	
Copper (T) Lead (T) Zinc (T)	3.19 5.84 10.8	1.76 2.86 4.07

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.29 0.53 0.98	(mg/l) <sup>2</sup> 0.16 0.26 0.37	0.716 1.65 2.86

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	- Maximum for any 1 day Maximur monthly age		
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T) Lead (T) Zinc (T)	3.19 8.7 16.2	1.76 4.3 6.17	

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47	(mg/l) <sup>2</sup> 0.16 0.39 0.56	0.716 2.42 4.41

¹kg/1,000 kkg (pounds per million pounds) of metal poured. ²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(f) Melting Furnace Scrubber Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater

than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly age		
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed		
Copper (T)	1.02	0.561	
Lead (T)	1.86 0.9		
Zinc (T)	3.44 1.:		
Total Phenols	3.01	1.05	

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.29 0.53 0.98 0.86	(mg/l) <sup>2</sup> 0.16 0.26 0.37 0.3	0.228 0.526 0.911 0.701

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed
²These concentrations must be multiplied by the ratio of

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed	
Copper (T)	1.02	0.561 1.37
Lead (T)		
Zinc (T)	5.15	1.96
Total Phenols	3.01	1.05

	Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
Copper (T)  Lead (T)  Zinc (T)  Total Phenols	(mg/l) <sup>2</sup> 0.29 0.79 1.47 0.86	(mg/l) <sup>2</sup> 0.16 0.39 0.56 0.3	0.228 0.771 1.4 0.701

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.
²These concentrations must be multiplied by the ratio of

(g) Mold Cooling Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to

<sup>&</sup>lt;sup>2</sup> These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of met poured		
Copper (T) Lead (T) Zinc (T)	0.0428 0.0783 0.145	0.0236 0.0384 0.0546	

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T) Lead (T)	(mg/l) <sup>2</sup> 0.29 0.53	(mg/l) <sup>2</sup> 0.16 0.26	0.0096 0.0222
Zinc (T)	0.98	0.37	0.0384

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant p	property			ximum for hthly aver- age	
		lior			ds per mil- of metal
Copper (T)			0.0428 0.117 0.217		0.0236 0.0576 0.0827
	Maxim for an		Maximu for mon		Annual aver-

(h) Slag Quench Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per r lion pounds) of me poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.0964	0.0473
Zinc (T)	0.178	0.0673

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.29	(mg/l) <sup>2</sup> 0.16	0.0118
Lead (T)	0.29	0.16	0.0118
Zinc (T)	0.98	0.20	0.0273

<sup>&</sup>lt;sup>1</sup> Kg/1,000 kkg (pounds per million pounds) of metal poured. <sup>2</sup> These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per lion pounds) of m poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.79	0.39	0.04
Zinc (T)	1.47	0.56	0.0728

 $<sup>^1\,\</sup>text{kg/1,000}$  kkg (pounds per million pounds) of metal poured.  $^2$  These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(i) Wet Sand Reclamation Operations. (1) Applicable to plants that are casting primarily ductible or gray iron and to plants that are casting malleable iron where greater than 3,557 tons of metal are poured per year.

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

**BAT EFFLUENT LIMITATIONS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (pounds per n lion pounds) of sand claimed	
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
Zinc (T)	0.732	0.276
Total Phenols	0.642	0.224

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.29 0.53 0.98	(mg/l) <sup>2</sup> 0.16 0.26 0.37	0.0485 0.112 0.194
Total Phenols	0.86	0.37	0.194

<sup>1</sup> kg/1000 kkg (pounds per million pounds) of sand re-

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

**BAT EFFLUENT LIMITATIONS** 

2711 211 202111 21111171110110			
Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly average		
	kg/1,000 kkg (pounds per mi lion pounds) of sand re claimed		
Copper (T)  Lead (T)  Zinc (T)  Total Phenols	0.217 0.59 1.1 0.642	0.12 0.291 0.418 0.224	

#### **PSNS**

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Connex (T)	(mg/l) <sup>2</sup> 0.29	(mg/l) <sup>2</sup> 0.16	0.0485
Copper (T)			
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total Phenols	0.86	0.3	0.149

<sup>1</sup> kg/1000 kkg (pounds per million pounds) of sand re-

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16, 1986]

#### § 464.34 New source performance standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/1,000 kkg or lb/million lb of sand reclaimed; kg/62.3 million Sm<sup>3</sup> or lb/billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

(a) Casting Cleaning Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage	
	kg/1,000 kkg (pounds per lion pounds) of m poured	
Copper (T)	0.0129 0.0237 0.0437 1.34 0.67	0.0071 0.0116 0.0165 0.446 0.536

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Copper (T) Lead (T) Zinc (T) Oil and grease TTS pH	(mg/l) <sup>2</sup> 0.29 0.53 0.98 30 15 ( <sup>3</sup> )	(mg/l) <sup>2</sup> 0.16 0.26 0.37 10 12 ( <sup>3</sup> )	0.0029 0.0067 0.0116 0.223 0.116 ( <sup>3</sup> )

<sup>1</sup> kg/1000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (5.33/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(2) Applicable to plants that are casting primarily steel and to plants that

<sup>&</sup>lt;sup>2</sup> These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

claimed.

2 These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

cific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage	
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0353	0.0174
Zinc (T)	0.0656	0.025
Oil and grease	1.34	0.446
TSS	1.7	0.67
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
Copper (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47 30 38 (3)	(mg/l) <sup>2</sup> 0.16 0.39 0.56 10 15 (3)	0.0029 0.0098 0.0179 0.223 0.446 (3)

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (5.35/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(b) Casting Quench Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum fo monthly ave age	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)  Lead (T)  Zinc (T)  Oil and grease  TSS	0.0138 0.0252 0.0466 1.43 0.713	0.0076 0.0124 0.0176 0.476 0.571	
pH	(1)	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.53	0.26	0.0071
Zinc (T)	0.98	0.37	0.0124
Oil and grease	30	10	0.238
TSS	15	12	0.124
pH	(3)	(3)	(3)

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum fo monthly aver age	
	kg/1,000 kkg (pounds per lion pounds) of me		
Copper (T)	0.0138 0.0376 0.0699 1.43 1.81	0.0076 0.0185 0.0266 0.476 0.713	
pH	(1)	(1)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0031
Lead (T)	0.79	0.39	0.0105
Zinc (T)	1.47	0.56	0.019
Oil and grease	30	10	0.238
TSS	38	15	0.476
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup> Kg/1000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

(c) Dust Collection Scrubber Operations. (1) Applicable to plants that are casting primarily ductible or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>1</sup> Kg/1000 kkg (pounds per million pounds) of metal poured. <sup>2</sup> Within the range of 7.0 to 10.0 at all times. <sup>3</sup> These concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly ave age	
	kg/62.3 million Sm³ (pounds p billion SCF) of air scrubbed	
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total Phenols	0.646	0.225
Oil and grease	22.5	7.51
TSS	11.3	9.01
pH	(¹)	(1)

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.53	0.26	0.113
Zinc (T)	0.98	0.37	0.195
Total phenols	0.86	0.3	0.15
Oil and grease	30	10	3.76
TSS	15	12	1.95
pH	(3)	(3)	(3)

<sup>1</sup>kg/62.3 millions Sm³ (pound per billion SCF) of air scrubbed.

<sup>2</sup>Within the range of 7.0 to 10.0 at all times.

<sup>3</sup>These concentrations must be multiplied by the ratio of (0.09/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds per f air scrubbed
Copper (T)	0.218 0.593 1.1 0.656 22.5 28.5 (1)	0.12 0.293 0.421 0.225 7.51 11.3 (1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0488
Lead (T)	0.79	0.39	0.165
Zinc (T)	1.47	0.56	0.3
Total phenols	0.86	0.3	0.15
Oil and grease	30	10	3.76
TSS	38	15	7.51
pH	(3)	(3)	(3)

 $^{1}\,\text{kg/}62.3$  millions  $\text{Sm}^{3}$  (pound per billion SCF) of air scrubbed.

2 Within the range of 7.0 to 10.0 at all times. <sup>3</sup>These concentrations must be multiplied by the ratio of (0.09) where is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

(d) Grinding Scrubber Operations. No discharge of process wastewater pollutants to navigable waters.

(e) Investment Casting. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per million pounds) of metal poure		
Copper (T) Lead (T)	3.19 5.84	1.76 2.86	
Zinc (T)	10.8	4.07	
Oil and grease	330	110	
TSS	165	132	
pH	( <sup>1</sup> )	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.716
Lead (T)	0.53	0.26	1.65
Zinc (T)	0.98	0.37	2.86
Oil and grease	30	10	55.1
TSS	15	12	28.6
pH	(3)	(3)	(3)

¹kg/¹,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³ Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly ave age		
	kg/1,000 kkg (pounds per million pounds) of metal poured		
Copper (T)	3.19	1.76	
Lead (T)	8.7	4.3	
Zinc (T)	16.2	6.17	
Oil and grease	330	110	
TSS	419	165	
pH	(1)	(1)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T)	(mg/l) <sup>2</sup> 0.29 0.79 1.47 30 38 (3)	(mg/l) <sup>2</sup> 0.16 0.39 0.56 10 15 (3)	0.716 2.42 4.41 55.1 110

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1,320/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

(f) Melting Furnace Scrubber Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly a age		
	kg/62.3 million Sm³ (poundager billion SCF) of air scrubb		
Copper (T)	1.02	0.561	
Lead (T)	1.86	0.911	
Zinc (T)	3.44	1.30	
Total phenols	3.01 1.0		
Oil and grease	105	35	
TSS	52.6	42.1	
pH	(¹)	(¹)	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.53	0.26	0.526
Zinc (T)	0.98	0.37	0.911
Total phenols	0.86	0.3	0.701
Oil and grease	30	10	17.5
TSS	15	12	9.11
pH	(3)	(3)	(3)

 $<sup>^{1}\</sup>mbox{kg/62.3}$  million  $\mbox{Sm}\,^{3}$  (pounds per billion SCF) of air scrubbed.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly avage	
	kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbe	
Copper (T)	1.02	0.561
Lead (T)	2.77	1.37
Zinc (T)	5.15	1.96
Total phenols	3.01	1.05
Oil and grease	105	35
TSS	133	52.6
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.228
Lead (T)	0.79	0.39	0.771
Zinc (T)	1.47	0.56	1.4
Total phenols	0.38	0.3	0.701
Oil and grease	30	10	17.5
TSS	38	15	35
pH	(3)	(3)	(3)

 $<sup>^{1}\</sup>mbox{kg/62.3}$  million  $\mbox{Sm}^{\,3}$  (pounds per billion SCF) of air scrubbed.

(g) Mold Cooling Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.42/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific

plant.

3 Within the range of 7.0 to 10.0 at all times.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly average		
	kg/1,000 kkg (pounds per mil lion pounds) of meta poured		
Copper (T)	0.0428 0.023		
Lead (T)	0.0783	0.0384	
Zinc (T)			
Oil and grease	4.43 1.48		
TSS	2.22 1.77		
pH	(1) (1)		

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) 1	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.53	0.26	0.0222
Zinc (T)	0.98	0.37	0.0384
Oil and grease	30	10	0.738
TSS	15	12	0.384
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million) pounds of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

# **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured		
Copper (T)	. 0.0428 0.03		
Lead (T)	0.117	0.0576	
Zinc (T)	. 0.217 0.0		
Oil and grease	. 4.43 1.4		
TSS	5.61 2.2		
pH	(1)		

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maxium for monthly average	Annual aver- age <sup>1</sup>
	(mg/1) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0096
Lead (T)	0.79	0.39	0.0325
Zinc (T)	1.47	0.56	0.0591
Oil and grease	30	10	0.738
TSS	38	15	1.48
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million) pounds of metal poured.

 $^2\,\text{These}$  concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.  $^3\,\text{Within}$  the range of 7.0 to 10.0 at all times.

(h) Slag Quench Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of me poured		
Copper (T)	0.0527 0.0964 0.178 5.46 2.73	0.0291 0.0473 0.0673 1.82 2.18	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0118
Lead (T)	0.53	0.26	0.0273
Zinc (T)	0.98	0.37	0.0473
Oil and grease	30	10	0.909
TSS	15	12	0.473
pH	(3)	(3)	(3)

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.
³Within the range of 7.0 to 10.0 at all times.

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

# **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per lion pounds) of m poured	
Copper (T)	0.0527	0.0291
Lead (T)	0.144	0.0709
Zinc (T)	0.267	0.102
Oil and grease	5.46	1.82
TSS	6.91	2.73
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual average
(mg/l) <sup>2</sup>	(mg/1) <sup>2</sup>	
0.29	0.16	0.0118
0.79	0.39	0.04
1.47	0.56	0.0728
30	10	0.909
38	15	1.82
(3)	(3)	(3)
	for any 1 day (mg/l) <sup>2</sup> 0.29 0.79 1.47 30 38	for any 1 for monthly average (mg/l) <sup>2</sup> (mg/l) <sup>2</sup> 0.29 0.16 0.79 0.39 1.47 0.56 30 10 38 15

¹ kg/1000 kkg (pounds per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (21.8/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plong?

(i) Wet Sand Reclamation Operations. (1) Applicable to plants that are casting primarily ductile or gray iron and to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pounds) claimed	oounds per mil- of sand re-
Copper (T)	0.217	0.12
Lead (T)	0.396	0.194
	0.732	0.134
Zinc (T)		
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	11.2	8.96
pH Hq	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
Copper (T)	(mg/l) <sup>2</sup> 0.29	(mg/l) <sup>2</sup> 0.16	0.0485
Lead (T)	0.53	0.26	0.112
Zinc (T)	0.98	0.37	0.194
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	15	12	1.94
pH	(3)	(3)	(3)

(2) Applicable to plants that are casting primarily steel and to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (pounds per mil lion pounds) of sand re claimed	
Copper (T)	0.217	0.12
Lead (T)	0.59	0.291
Zinc (T)	1.1	0.418
Total phenols	0.642	0.224
Oil and grease	22.4	7.47
TSS	28.4	11.2
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.29	0.16	0.0485
Lead (T)	0.79	0.39	0.164
Zinc (T)	1.47	0.56	0.299
Total phenols	0.86	0.3	0.149
Oil and grease	30	10	3.73
TSS	38	15	7.47
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of sand reclaimed.

[50 FR 45247, Oct. 30, 1985; 51 FR 21761, June 16. 1986]

#### §464.35 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing

(a) Casting Cleaning Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of sand reclaimed.

<sup>2</sup>These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

<sup>3</sup>Withis the range of 7.0 to 10.0 st all times

<sup>&</sup>lt;sup>3</sup> Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (89.5/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of sand reclaimed) for a specific plant.

<sup>3</sup>Within the range of 7.0 to 10.0 at all times.

#### **PSES**

Pollutant or pollutant property	Maximum for Maximum for monthly aver-	
	any 1 day	age
	kg/1,000 kkg (pounds per million pounds) of metal poured	
Copper (T)	0.0129	0.0071
Lead (T)	0.0237	0.0116
Zinc (T)	0.0437	0.0165

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T) Lead (T) Zinc (T)	0.0129 0.0353 0.0656	0.0071 0.0174 0.025

(b) Casting Quench Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per mi lion pounds) of met poured	
Copper (T)	0.0138 0.0252	0.0076 0.0124
Zinc (T)	0.0466	0.0176
TTO	0.0257	0.00838
Oil and grease (for alternate		
monitoring)	1.43	0.476

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T)  Lead (T)  Zinc (T)  TTO  Oil and grease (for alternate	0.0138 0.0376 0.0699 0.0257	0.0076 0.0185 0.0266 0.00838
monitoring)	1.43	0.476

(c) Dust Collection Scrubber Operations.
(1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm <sup>3</sup> (pounds of air scrubbed
Copper (T)	0.218 0.398 0.736 0.646 2.04	0.12 0.195 0.278 0.225 0.664 7.51

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm³ (pounds of air scrubbed
Conner (T)	0.218	0.42
Copper (T)	0.218	0.12
Lead (T)	0.593	0.293
Zinc (T)	1.1	0.421
Total Phenols	0.656	0.225
TTO	2.04	0.664
Oil and Grease (for alter-		
nate monitoring)	22.5	7.51

- (d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.
- (e) *Investment Casting*. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg million pounds)	
Copper (T)	3.19	1.76
,		
Lead (T)	5.84	2.86
Zinc (T)	10.8	4.07
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg million pounds)	(pounds per of metal poured
Copper (T) Lead (T)	3.19 8.7	1.76 4.3
Zinc (T)	16.2	6.17
TTO	13.2	4.3
Oil and Grease (for alternate monitoring)	330	110

(f) Melting Furnace Scrubber Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	Sm³ (pounds per f air scrubbed
Copper (T) Lead (T) Zinc (T) Total phenols TTO Oil and grease (for alter-	1.02 1.86 3.44 3.01 8.34	0.561 0.911 1.30 1.05 2.73
nate monitoring)	105	35

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		6m <sup>3</sup> (pounds per f air scrubbed
Copper (T)	1.02 2.77 5.15 3.01 8.34	0.561 1.37 1.96 1.05 2.73
nate monitoring)	105	35

(g) Mold Cooling Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per lion pounds) of m poured	
Copper (T)	0.0428 0.0783 0.145 0.0797	0.0236 0.0384 0.0546 0.026
Oil and grease (for alternate monitoring)	4.43	1.48

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

# PSES

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T)	0.0428 0.117 0.217 0.0797	0.0236 0.0576 0.0827 0.026
monitoring)	4.43	1.48

(h) Slag Quench Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are

casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property any		
Copper (T)  Lead (T)  Zinc (T)  TTO  Oil and grease (for alternate	mum for 1 day	Maximum for monthly average
Lead (T) Zinc (T) TTO Oil and grease (for alternate	pound	oounds per mil- ls) of metal
	0.0527 0.0964 0.178 0.0257	0.0291 0.0473 0.0673 0.00838
	5.46	1.82

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T)  Lead (T)  Zinc (T)  TTO  Oil and grease (for alternate	0.0527 0.144 0.267 0.0257	0.0291 0.0709 0.102 0.00838
monitoring)	5.46	1.82

(i) West Sand Reclamation Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
	kg/1,000 kkg (p lion pounds) claimed	
Copper (T)	0.217 0.396 0.732 0.642 1.18	0.12 0.194 0.276 0.224 0.386
Oil and grease (for alter- nate monitoring)	22.4	7.47

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

**PSES** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pounds) claimed	oounds per mil- of sand re-
Copper (T) Lead (T) Zinc (T) Total Phenols TTO Oil and grease (for alter-	0.217 0.59 1.1 0.642 1.18	0.12 0.291 0.418 0.224 0.386
nate monitoring)	22.4	7.47

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

# § 464.36 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

(a) Casting Cleaning Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T) Lead (T) Zinc (T)	0.0129 0.0237 0.0437	0.0071 0.0116 0.0165

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per mi lion pounds) of met poured	
Copper (T)	0.0129 0.0353 0.0656	0.0071 0.0174 0.025

(b) Casting Quench Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		(pounds per of metal poured
Copper (T)	0.0138 0.0252 0.0466 0.0257	0.0076 0.0124 0.0176 0.00838
nate monitoring)	1.43	0.476

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that

are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		oounds per mil- s) of metal
Copper (T)  Lead (T)  Zinc (T)  TTO  Oil and Grease (for alternate	0.0138 0.0376 0.0699 0.0257	0.0076 0.0185 0.0266 0.00838
monitoring)	1.43	0.476

(c) Dust Collection Scrubber Operations.
(1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSNS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	Sm³ (pounds per f air scrubbed
Copper (T)	0.218	0.12
Lead (T)	0.398	0.195
Zinc (T)	0.736	0.278
Total Phenols	0.646	0.225
TTO	2.04	0.664
Oil and Grease (for alter-		
nate monitoring)	22.5	7.51

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	Sm³ (pounds per f air scrubbed
Copper (T) Lead (T) Zinc (T) Total Phenols TTO Oil and Grease (for alter-	0.218 0.593 1.1 0.656 2.04	0.12 0.293 0.421 0.225 0.664
nate monitoring)	22.5	7.51

- (d) *Grinding Scrubber Operations.* No discharge of process wastewater pollutants to a POTW.
- (e) *Investment Casting*. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSNS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		(pounds per of metal poured
Copper (T)	3.19 5.84 10.8 13.2	1.76 2.86 4.07 4.3
nate monitoring)	330	110

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg million pounds)	(pounds per of metal poured
Copper (T)	3.19 8.7 16.2 13.2	1.76 4.3 6.17 4.3
nate monitoring)	330	110

(f) Melting Furnace Scrubber Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
		Sm³ (pounds per f air scrubbed
Copper (T)	1.02 1.86 3.44 3.01 8.34	0.561 0.911 1.3 1.05 2.73
nate monitoring)	105	35

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	Sm³ (pounds per f air scrubbed
Copper (T) Lead (T) Zinc (T) Total Phenols TTO Oil and Grease (for alter-	1.02 2.77 5.15 3.01 8.34	0.561 1.37 1.96 1.05 2.73
nate monitoring)	105	35

(g) Mold Cooling Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly aver- age
		oounds per mil- s) of metal
Copper (T)	0.0428 0.0783 0.145 0.0797	0.0236 0.0384 0.0546 0.026
Oil and Grease (for alternate monitoring)	4.43	1.48

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T)	0.0428 0.117 0.217 0.0797 4.43	0.0236 0.0576 0.0827 0.026

(h) Slag Quench Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (p lion pound poured	oounds per mil- s) of metal
Copper (T)  Lead (T)  Zinc (T)  TTO  Oil and grease (for alternate	0.0527 0.0964 0.178 0.0257	0.0291 0.0473 0.0673 0.00838
monitoring)	5.46	1.82

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

**PSNS** 

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly a age	
	kg/1,000 kkg (pounds per m lion pounds) of met poured	
Copper (T)	0.0527 0.144 0.267	0.0291 0.0709 0.102
Oil and grease (for alternate monitoring)	0.0257 5.46	0.00838 1.82

(i) Wet Sand Reclamation Operations. (1) Applicable to plants that are casting primarily ductile iron, to plants that are casting primarily malleable iron where greater than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where greater than 1,784 tons of metal are poured per year.

**PSNS** 

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (p lion pounds) claimed	oounds per mil of sand re	
Copper (T)	0.217 0.396 0.732 0.642 1.18	0.12 0.194 0.276 0.224 0.386	
nate monitoring)	22.4	7.47	

(2) Applicable to plants that are casting primarily steel, to plants that are casting primarily malleable iron where equal to or less than 3,557 tons of metal are poured per year, and to plants that are casting primarily gray iron where equal to or less than 1,784 tons of metal are poured per year.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of sand r claimed		
Copper (T)	0.217 0.59 1.10 0.642 1.18	0.12 0.291 0.418 0.224 0.386	
nate monitoring)	22.4	7.47	

§ 464.37 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

# Subpart D—Zinc Casting Subcategory

# § 464.40 Applicability; description of the zinc casting subcategory.

The provisions of this subpart are applicable to discharges to waters of the United States and to the introduction of pollutants into publicly owned treatment works resulting from zinc casting operations as defined in §464.02(d).

## § 464.41 Specialized definitions.

For the purpose of this subpart:

- (a) *Total Toxic Organics* (TTO). TTO is a regulated parameter under PSES (§ 464.45) and PSNS (§ 464.46) for the zinc subcategory and is comprised of a discrete list of toxic organic pollutants for each process segment where it is regulated, as follows:
- (1) Casting Quench ( $\S464.45(a)$  and  $\S464.46(a)$ ):
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 31. 2,4-dichlorophenol
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 85. tetrachloroethylene
- (2) Die Casting (§ 465.45(b) and § 464.46(b)):
- 1. acenaphthene
- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol

- 24. 2-chlorophenol
- 34. 2,4-dimethylphenol
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 65. phenol
- 66. bis (2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 85. tetrachloroethylene
- 86 toluene
- 87. trichloroethylene

#### Melting Furnace Scrubber (§ 464.45(c) and § 464.46(c)):

- 31. 2,4-dichlorophenol
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 55. naphthalene
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 85. tetrachloroethylene
- 86. toluene
- 87. trichloroethylene

#### (4) Mold Cooling (§ 464.45(d) and §464.46(d)):

- 21. 2,4,6-trichlorophenol
- 22. para-chloro meta-cresol
- 31. 2,4-dichlorophenol
- 34. 2,4-dimethylphenol
- 39. fluoranthene
- 44. methylene chloride (dichloromethane)
- 65. phenol
- 66. bis(2-ethylhexyl) phthalate
- 68. di-n-butyl phthalate
- 70. diethyl phthalate
- 85. tetrachloroethylene

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16. 1986]

# § 464.42 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/ billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/1) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to noncontinuous dischargers.

# (a) Casting Quench Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per m lion pounds) of me poured		
Copper (T)	0.0344 0.0353	0.0187 0.0174	
Zinc (T)	0.0509	0.0192	
Oil and grease	1.34	0.446	
TSS	1.7	0.67	
pH	(1)	(1)	

<sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/1) <sup>2</sup>	(mg/1) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0076
Lead (T)	0.79	0.39	0.0098
Zinc (T)	1.14	0.43	0.0121
Oil and grease	30	10	0.223
TSS	38	15	0.446
pH	(3)	(3)	(3)

#### (b) Die Casting Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per lion pounds) of m poured		
Copper (T)	0.0066 0.0068 0.0098 0.0074 0.259 0.328	0.0036 0.0034 0.0037 0.0026 0.0864 0.13	

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

Maximum for any 1 day	Maximum for monthly average	Annual average <sup>1</sup>
(ma/l) <sup>2</sup>	(ma/l) <sup>2</sup>	

¹ kg/1000 kkg (pound per million pounds) of metal poured.
² These concentrations must be multiplied by the ratio of (5.35/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific slore!

cific plant.

<sup>3</sup>Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.79	0.39	0.0019
Zinc (T)	1.14	0.43	0.0023
Total phenols	0.86	0.3	0.0017
Oil and grease	30	10	0.0432
TSS	38	15	0.0864
pH	(3)	(3)	(3)

¹kg/1000 kkg (pound per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (c) Melting Furnace Scrubber Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum monthly age	
	kg/62.3 millions per billion scrubbed	s Sm <sup>3</sup> (pounds SCF) of air
Copper (T)	1.56	0.852
Lead (T)	1.6	0.791
Zinc (T)	2.31	0.872
Total Phenols	1.74	0.608
Oil and grease	60.8	20.3
TSS	77.1	30.4
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.345
Lead (T)	0.79	0.39	0.446
Zinc (T)	1.14	0.43	0.548
Total Phenols	0.86	0.3	0.406
Oil and grease	30	10	10.1
TSS	38	15	20.3
pH	(3)	(3)	(3)

 $<sup>^{1}\</sup>mbox{kg/}62.3$  million  $\mbox{Sm}\,^{3}$  (pounds per billion SCF) of air scrubbed.

# (d) Mold Cooling Operations.

#### **BPT EFFLUENT LIMITATIONS**

Pollutar	nt or pollutant property	Maximum for any 1 day	Maximum for monthly average
		kg/1,000 kkg (p lion pound poured	oounds per mil- s) of meta
Lead (T Zinc (T) Oil and	(T) ) grease	0.304 0.311 0.449 11.8 15	0.166 0.154 0.17 3.94 5.91
рН		( <sup>1</sup> )	(¹)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.067
Lead (T)	0.79	0.39	0.0867
Zinc (T)	1.14	0.43	0.106
Oil and grease	30	10	1.97
TSS	38	15	3.94
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
2 These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

# § 464.43 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable, except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/billion SCF of air scrubbed) effluent limitations for copper, lead, zinc, and total phenols. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/1) limitations shall apply. Concentration limitations and annual average mass limitations shall only apply to non-continuous dischargers.

<sup>&</sup>lt;sup>3</sup>Within the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>2</sup>These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed for a specific plant.

specific plant.

<sup>3</sup>Within the range of 7.0 to 10.0 at all times.

cific plant.

<sup>3</sup> Within the range of 7.0 to 10.0 at all times.

# (a) Casting Quench Operations.

#### **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per mil lion pounds) of meta poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/ l) <sup>2</sup>	(mg/ l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.0076
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.76	0.29	0.008

<sup>&</sup>lt;sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup> These concentrations must be multiplied by the ratio of (5.34/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (b) Die Casting Operations.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022
Zinc (T)	0.0066	0.0025
Total phenols	0.0074	0.0026

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age 1
	(mg/	(mg/	
Copper (T)	0.77	0.42	0.0015
Lead (T)	0.53	0.26	0.0013
Zinc (T)	0.76	0.29	0.0016
Total phenols	0.86	0.3	0.0017

¹kg/1,000 kkg (pounds per million pounds) of metal poured.
²These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (c) Melting Furnace Scrubber Operations.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/62.3 million Sm³ (pounds pe billion SCF) of air scrubbed		
Copper (T) Lead (T)	1.56 1.07	0.852 0.527	
Zinc (T)	1.54	0.588	
Total phenolse	1 74	0.608	

	Maximum for any 1 day	Maximum for monthly average	Annual average 1
Copper (T) Lead (T) Zinc (T)	(mg/ l) <sup>2</sup> 0.77 0.53 0.76 0.86	(mg/ l) <sup>2</sup> 0.42 0.26 0.29 0.3	0.345 0.304 0.365 0.406

## (d) Mold Cooling Operations.

# **BAT EFFLUENT LIMITATIONS**

Pollutant or pollutant prop	perty	Maximum for any 1 day		Maximum for monthly average
		lioi		ounds per mil- of metal
Copper (T)			0.304 0.209 0.3	0.166 0.103 0.114
	Maxi	mum	Maximum	Appual ave

	Maximum for any 1 day	Maximum for monthly average	Annual av- erage <sup>1</sup>
Copper (T) Lead (T) Zinc (T)	(mg/l) <sup>2</sup> 0.77 0.53 0.76	(mg/l) <sup>2</sup> 0.42 0.26 0.29	0.067 0.0591 0.071

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured. <sup>2</sup>These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a spe-cific plant.

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

#### §464.44 New performance source standards.

Any new source subject to this subpart must achieve the following new source performance standards (NSPS), except that non-continuous dischargers shall not be subject to the maximum day and maximum for monthly average

¹kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.
² These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process waste-water flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# 40 CFR Ch. I (7-1-99 Edition)

# § 464.44

mass (kg/1,000 kkg or lb/million lb of metal poured; kg/62.3 million Sm3 or lb/ billion SCF of air scrubbed) effluent standards for copper, lead, zinc, total phenols, oil and grease, and TSS. For non-continuous dischargers, annual average mass standards and maximum day and maximum for monthly average concentration (mg/l) standards shall apply. Concentration standards and annual average mass standards shall only apply to non-continuous dischargers.

## (a) Casting Quench Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day  Maximum for monthly age		
	kg/1,000 kkg (pounds per m lion pounds) of met poured		
Copper (T)	0.0344	0.0187	
Lead (T)	0.0237	0.0116	
Zinc (T)	0.0339	0.0129	
Oil and grease	1.34	0.446	
TSS	0.67	0.536	
pH	(1) (1)		

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper			
(T)	0.77	0.42	0.0076
Lead (T)	0.53	0.26	0.0067
Zinc (T)	0.76	0.29	0.008
Oil and			
grease	30	10	0.223
TSS	15	12	0.116
pH	(3)	(3)	(3)

<sup>&</sup>lt;sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured.
<sup>2</sup>These concentrations must be multiplied by the ratio of (5.34/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

# (b) Die Casting Operations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per r lion pounds) of me poured	
Copper (T)	0.0066	0.0036
Lead (T)	0.0046	0.0022

	ally I day	age
		oounds per mil- s) of metal
Copper (T)	0.0066 0.0046 0.0066 0.0074 0.259 0.13	0.0036 0.0022 0.0025 0.0026 0.0864 0.104
pH	(1)	(1)

**NSPS** 

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper			
(T)	0.77	0.42	0.0015
Lead (T)	0.53	0.26	0.0013
Zinc (T)	0.76	0.29	0.0016
Total			
phenols	0.86	0.3	0.0017
Oil and			
grease	30	10	0.0432
TSS	15	12	0.0225
pH	(3)	(3)	(3)

<sup>1</sup>kg/1,000 kkg (pounds per million pounds) of metal poured.
2These concentrations must be multiplied by the ratio of (1.04/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

#### (c) Melting Furnace Scrubber Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million S billion SCF) o	Sm³ (pounds per f air scrubbed
Copper (T) Lead (T) Zinc (T) Total phenols Oil and grease TSS pH	1.56 1.07 1.54 1.74 60.8 30.4	0.852 0.527 0.588 0.608 20.3 24.3

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

 $<sup>^{\</sup>rm 3}\,\dot{\rm W}$  ithin the range of 7.0 to 10.0 at all times.

<sup>&</sup>lt;sup>3</sup>Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly average	Annual aver- age <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper			
(T)	0.77	0.42	0.345
Lead (T)	0.53	0.26	0.304
Zinc (T)	0.76	0.29	0.365
Total			
phenols	0.86	0.3	0.406
Oil and			
grease	30	10	10.1
TSS	15	12	5.27
pH	(3)	(3)	(3)

# (d) Mold Cooling Operations.

#### **NSPS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per million pounds) of metal poure	
O (T)	0.304	0.400
Copper (T)		0.166
Lead (T)	0.209	0.103
Zinc (T)	0.3	0.114
Oil and grease	11.8	3.94
TSS	5.91	4.73
pH	(1)	(1)

<sup>&</sup>lt;sup>1</sup> Within the range of 7.0 to 10.0 at all times.

	Maximum for any 1 day	Maximum for monthly aver- age	Annual av- erage <sup>1</sup>
	(mg/l) <sup>2</sup>	(mg/l) <sup>2</sup>	
Copper (T)	0.77	0.42	0.067
Lead (T)	0.53	0.26	0.0591
Zinc (T)	0.76	0.29	0.071
Oil and			
grease	30	10	1.97
TSS	15	12	1.03
pH	(3)	(3)	(3)

<sup>1</sup> kg/1,000 kkg (pounds per million pounds) of metal poured.

2 These concentrations must be multiplied by the ratio of (47.3/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured) for a specific plant.

3 Within the range of 7.0 to 10.0 at all times.

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

#### §464.45 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources.

# (a) Casting Quench Operations.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per n lion pounds) of me poured	
Copper (T)	0.0344	0.0187
Lead (T)	0.0237	0.0116
Zinc (T)	0.0339	0.0129
TTO	0.093	0.0304
Oil and grease (for alternate		
monitoring)	1.34	0.446

# (b) Die Casting Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds p million pounds of me poured)	
Copper (T)	0.0066 0.0046 0.0066 0.0074 0.0196	0.0036 0.0022 0.0025 0.0026 0.0064
monitoring)	0.259	0.0864

#### (c) Melting Furnace Scrubber Operations.

# **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air
Copper (T)	1.56 1.07 1.54 1.74 3.95	0.852 0.527 0.588 0.608 1.29
monitoring)	60.8	20.3

# (d) Mold Cooling Operations.

<sup>1</sup> kg/62.3 million Sm³ (pounds per billion SCF) of air scrubbed.

2 These concentrations must be multiplied by the ratio of (0.243/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 SCF of air scrubbed) for a specific plant.

3 Within the range of 7.0 to 10.0 at all times.

#### **PSES**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per m lion pounds) of me poured	
Copper (T)	0.304 0.209 0.3 0.821	0.166 0.103 0.114 0.268
Oil and grease for alternate monitoring)	11.8	3.94

# § 464.46 Pretreatment standards for new sources.

Except as provided in 40 CFR 403.7, any new source subject to this subpart which introduces pollutants into publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources.

# (a) Casting Quench Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average	
	kg/1,000 kkg (pounds per mi lion pounds) of meta poured		
Copper (T)	0.0344	0.0187 0.0116	
Lead (T) Zinc (T)	0.0237 0.0339	0.0116	
TTO	0.093	0.0304	
monitoring)	1.34	0.446	

### (b) Die Casting Operations.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg million poun poured	(pounds per ds) of metal
Copper (T)	0.0066 0.0046 0.0066 0.0074 0.0196	0.0036 0.0022 0.0025 0.0026 0.0064
monitoring)	0.259	0.0864

(c) Melting Furnace Scrubber Operations.

# **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/62.3 million per billion scrubbed	Sm³ (pounds SCF) of air
Copper (T)	1.56 1.07 1.54 1.74 3.95	0.852 0.527 0.588 0.608 1.29
monitoring)	60.8	20.3

# (d) Mold Cooling Operations.

#### **PSNS**

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	kg/1,000 kkg (pounds per mil- lion pounds) of metal poured	
Copper (T)	0.304 0.209 0.3 0.821	0.166 0.103 0.114 0.268 3.94

[50 FR 45247, Oct. 30, 1985; 51 FR 21762, June 16, 1986]

§ 464.47 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology. [Reserved]

# PART 465—COIL COATING POINT SOURCE CATEGORY

GENERAL PROVISIONS

Sec.

465.01 Applicability.

465.02 General definitions.

 $465.03\ \mbox{Monitoring}$  and reporting requirements.

465.04 Compliance date for PSES.

#### Subpart A—Steel Basis Material Subcategory

- 465.10 Applicability; description of the steel basis material subcategory.
- 465.11 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
  465.12 Effluent limitations representing the